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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/638,924	08/15/2000	William Lewis Betts	61607-1260	9164

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THOMAS, KAYDEN, HORSTEMEYER & RISLEY, LLP
100 GALLERIA PARKWAY, NW
STE 1750
ATLANTA, GA 30339-5948

EXAMINER

GHULAMALI, QUTBUDDIN

ART UNIT	PAPER NUMBER
2631	6

DATE MAILED: 06/07/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/638,924

Applicant(s)

BETTS ET AL.

Examiner

Qutub Ghulamali

Art Unit

2631

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 March 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 3-5, 17-21, 27-29 and 34-74 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 3-5, 17-21, 27-29 and 34-74 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 15 August 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- 1) ☐ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. _____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input checked="" type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Interview Summary	Application No.		Applicant(s)	
	09/638,924		BETTS ET AL.	
	Examiner		Art Unit	
	Qutub Ghulamali		2631	

All participants (applicant, applicant's representative, PTO personnel):

(1) Qutub Ghulamali. (3)_____

(2) Mr. Sami O. Malas. (4)_____

Date of Interview: 28 May 2004.

Type: a) ☒ Telephonic b) ☐ Video Conference
c) ☐ Personal [copy given to: 1) ☐ applicant 2) ☐ applicant's representative]

Exhibit shown or demonstration conducted: d) ☐ Yes e) ☐ No.
If Yes, brief description: _____

Claim(s) discussed: 3,17-19,27-29,35,38,41,44,47,49,54,58,65,69 and 73.

Identification of prior art discussed: _____

Agreement with respect to the claims f) ☒ was reached. g) ☐ was not reached. h) ☐ N/A.

Substance of Interview including description of the general nature of what was agreed to if an agreement was reached, or any other comments: Applicant's representative agrees to amend claims 3,17-19,27-29,35,38,41,44,47,49,54,58,65,69 and 73, as indicated in the attached examiner's amendment. Such amendment is necessary to correct for some minor informalities so as to advance prosecution.

(A fuller description, if necessary, and a copy of the amendments which the examiner agreed would render the claims allowable, if available, must be attached. Also, where no copy of the amendments that would render the claims allowable is available, a summary thereof must be attached.)

THE FORMAL WRITTEN REPLY TO THE LAST OFFICE ACTION MUST INCLUDE THE SUBSTANCE OF THE INTERVIEW. (See MPEP Section 713.04). If a reply to the last Office action has already been filed, APPLICANT IS GIVEN ONE MONTH FROM THIS INTERVIEW DATE, OR THE MAILING DATE OF THIS INTERVIEW SUMMARY FORM, WHICHEVER IS LATER, TO FILE A STATEMENT OF THE SUBSTANCE OF THE INTERVIEW. See Summary of Record of Interview requirements on reverse side or on attached sheet.

Examiner Note: You must sign this form unless it is an Attachment to a signed Office action.

Examiner's signature, if required

Art Unit: 2631

DETAILED ACTION

Acknowledgment

1. This Office Action is responsive to the Amendment filed on 03/12/2004.

EXAMINER'S AMENDMENT

2. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Mr. Sami O. Malas on 05/28/2004.

3. The application has been amended as follows:

IN THE CLAIMS:

Claims 3 and 49, line 1 respectively, after "comprising" --:-- has been inserted.

Claims 17-19, 27-29, line 3 respectively, after "comprising", --the steps of-- has been inserted.

Claims 35, 38, 41, 44, 47, 54, 58, 65, 69, and 73, line 2 respectively, "period" has been replaced by --periodic--.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 3, 17-19, 27, 28, 29, 34, 37, 40, 43, 46, 49, 52, 53, 56, 57, 60, 63, 64, 67, 68, 71 and 72 are rejected under 35 U.S.C. 103(a) as being unpatentable over Maxwell et al ("Maxwell") (US Patent No. 4,771,417) in view of Frick et al ("Frick") (US Patent No. 5,473,676, new art).

Maxwell (figs. 1, 12) teaches a control circuit configured in the form of a processor to direct the overall operation of the modem (col. 4, lines 32-44), the ability of the modem to detect errors (transients) in data transmission, based upon the calculated ratio a determination is made whether the quality of the data transmission indicates qualification for a fallback (lowering the rate) in speed, if there had been retransmission of any data frame at least the predetermined number of times, and if the modem is linked in the lowest fallback speed, then the modem disconnects, if the link is not in the lowest fallback speed, the modem sets up the link for one step lower in speed and reenters the transmit sequence, if it is determined that a predetermined number of preceding transmitted frames included any retransmitted data, the routine makes an evaluation for qualification to fallforward (higher rate) to a higher speed, to determine the quality of the line, the processor of the modem constantly monitors the number of errors in data transmission as reflected by the number of retransmitted data frames, if the number of

Art Unit: 2631

retransmissions is high, indicating too many errors are encountered and line quality is poor, the modem drops down to the next lower speed until an acceptable reduction in errors in transmission is achieved. If the line quality improves and the number of errors is reduced, the modem will automatically fallforward to the next higher speed, if the acknowledgement does not come within a prescribed time out period (time lapsed) the modem initiates recovery by establishing the link and reentering the transmit sequence, (col. 19, lines 46-67; col. 20, lines 10-18, 29-40). Maxwell however, fails to disclose processor is further configured to measure the length of time between errors or transients in data communication. Frick discloses (fig. 8), a processor 30 sets up its modem 24 at step 510 to detect incoming speed tones, the processor 30 also starts the timer to measure the time elapsed from the setup of the modem 24 until the speed tones are received, and at step 520, the processor 30 determines which tones were detected, and thus determines the data rate for the acknowledgment data to be received. It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Maxwell's communication system wherein the processor is configured to measure the length of time and time elapsed between errors or transients in data communication so as to facilitate the communication process capabilities as taught by Frick (col. 11, lines 52-61).

5. Claims 4, 5, 20, 21, 35, 36, 38, 39, 41, 42, 44, 45, 47, 48, 50, 51, 54, 55, 58, 59, 61, 62, 65, 66, 69, 70, 73 and 74 are rejected under 35 U.S.C. 103(a) as being unpatentable over Maxwell et al ("Maxwell") (US Patent No. 4,771,417) in view of Frick et al ("Frick") (US Patent No. 5,473,676, new art) and further in view of Parrott (US Patent No. 6,351,533, new art).

As indicated above with reference to claims 3, 17-19, 27, 28, 29, 34, 37, 40, 43, 46, 49, 52, 53, 56, 57, 60, 63, 64, 67, 68, 71 and 72, Maxwell and Frick in combination with other

Art Unit: 2631.

limitations teaches every feature of the claimed invention, but fails to disclose processor configured to determine the cadence of errors or transients. Parrott (fig. 3) with reference to claims 4, 5, 20, 21, 35, 36, 38, 39, 41, 42, 44, 45, 47, 48, 50, 51, 54, 55, 58, 59, 61, 62, 65, 66, 69, 70, 73 and 74 discloses a ring signal 317 is routed to processor 318 where signal 317 is analyzed for duration and cadence (col. 6, lines 9-15). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Maxwell's and Frick's communication system wherein the processor determines the cadence of errors or transients so as to improve the communication process as taught by Parrott.

Conclusion

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Qutub Ghulamali whose telephone number is (703) 305-7868. The examiner can normally be reached on Monday-Friday from 8:00AM - 5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mohammed Ghayour can be reached on 703 306-3034. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Application/Control Number: 09/638,924
Art Unit: 2631

Page 6

QG.
May 28, 2004.

Khai Tran
KHAI TRAN
PRIMARY EXAMINER 6/1/04